SCHOOL LIFE

Official Journal of the . . .

OFFICE OF EDUCATION

In this issue

Languages in USSR Schools
MILDENBERGER, JOHNSTON, FAIRBANKS

Land-grant colleges: 100 years
HENRY S. BRUNNER

OCTOBER 1960

CONTENTS

3 Brief reports
White House Conference
Teachers name issues
UNICEF greeting cards
Army radio series
Summer seminars

5 Languages in the USSR
Mildenberger, Johnston, Fairbanks

8 State accreditation
William B. Rich

11 Flexible schools
James L. Taylor

14 Industrial arts
Marshall L. Schmitt

16 Research reports in libraries

17 Size of school districts
Emery M. Foster

18 Ad Minutes

21 Land-grant colleges
Henry S. Brunner

36 OE publications

AMERICAN EDUCATION WEEK 1960

WHEREAS the American system of free public education, recognizing the supreme importance of the individual and his right to develop his capacities to the full, has created a virile and powerful society of responsible citizens; and

WHEREAS this educational system is a means for preserving the most precious heritage of our land and a basic requirement for further social and economic advances; and

WHEREAS, through the benefits of education, the peoples of the world have entered a new age which can open up an intensified attack on the ancient ills of poverty, disease, and ignorance and which can harness the energies of mankind for a better way of life for all; and

WHEREAS it is imperative that we continue to lead in this age by building on the accomplishments of the past so that our educational system will adequately prepare our children for the responsibilities of the future:

NOW, THEREFORE, I, DWIGHT D. EISENHOWER, President of the United States of America, do hereby designate the period from November 6 through November 12, 1960, as American Education Week; and I urge citizens throughout the Nation to participate actively in the observance of that week in their schools and communities.

Let us reaffirm our deep interest in the training ground of democracy. Let us study the programs of our schools and demonstrate our support for the work of our dedicated teachers. Let us take every opportunity to strengthen our educational system so that our young people can be prepared to meet the challenge imposed on our Nation by this competitive century.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DWIGHT D. EISENHOWER

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • ARTHUR S. FLEMMING, *Secretary*

OFFICE OF EDUCATION . . . LAWRENCE G. DERTHICK, *Commissioner*

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Brief. . . . . EDUCATION AND GOVERNMENT Reports . . . . . .

WHC recommendations

One of the major goals of the Golden Anniversary White House Conference on Children and Youth, held in Washington, D.C., on March 27-April 2, 1960, was to erect guideposts for citizen action during the next 10 years. Those guideposts are now in print, in *Recommendations, Composite Report of Forum Findings* (sold for 35 cents a copy by the Superintendent of Documents, Government Printing Office, Washington 25, D.C.). The report contains the specific recommendations of the 18 conference forums, in which the 7,600 delegates worked on such topics as physical and social environment, health, education, human rights, religion, values and ideals, and international programs. It also contains the conference's general recommendations and its recommendations for follow-up by State and local committees.

Of the 670 recommendations made by the forums, 124 are on education. They include recommendations on scholarships, student loans, community responsibility, school programs in general, curriculum, vocational education, social life, school administration, extension of public education, dropouts, rural schools, higher education, special education, pupil personnel services, guidance, recruitment and preparation of teachers, teachers' salaries, instructional material, school district reorganization, and research. In addition, the section on employment contains recommendations on vocational and apprenticeship training.

In looking toward 1970, when the next White House Conference on Children and Youth will be held, the conference recommended that it "be conceived as a prelude to a world conference on children and youth, to be held during the summer of that year at the invitation of the Secretary General of the United Nations."

Basic issues

Many of the teachers who visited the Office of Education's exhibit booth at the National Education Association's convention in Los Angeles, June 26–July 1, have told the Office what they think is the basic issue in education. They made their statements on a 1-question form given them at the booth along with Commissioner Derthick's *Schools in Our Democracy*, which analyzes five basic issues in education:

1. Should the school be concerned with the intellect alone?

2. Should we substitute the specialized secondary school system of Western Europe for our comprehensive high school?

3. Should there be national standards specifying what every boy and girl should know at age 18 so that every parent could tell how well his children have done in school and how good their teachers are?

4. Are the European systems of education superior to the American system?

5. Is the American school administrator prepared and competent to carry out his responsibility?

Some teachers took out pen or pencil on the spot and answered the question, "What do *you* consider the basic issue in American education today?" Others replied later by mail. *School Life's* tabulation of the replies received by mid-September adds up this way:

The largest number: Equalizing educational opportunities for all children.

Almost as many: Adequate financing to attain or retain high academic standards.

Next in number: Curriculum improvement and improvement of teaching and teaching conditions.

Still others: Teaching citizenship and the good life and instilling values in students.

Single voices: Integrity and steadiness of the home, academic freedom, adaptation to urban life, foreign language learning, parent education, teaching the love of constitutional government, separation of church and state, and the conflict between public and private schools.

Schools in Our Democracy is for sale by the Superintendent of Documents, Government Printing Office,

Washington 25, D.C., for 15 cents a copy. The printing office will grant a 25-percent discount on quantities of 100 or more. The Publications Inquiry Unit of the Office of Education has a limited supply and will give single copies on request.

UNICEF greeting cards

Many of the world's billion children will be sick and hungry all their short lives, for three-fourths of them live in lands where sickness and hunger are far from conquered. To free them of illness, to still their hunger—this is the purpose of the United Nation's Children's Fund. Last year, through voluntary gifts, UNICEF, the only agency of the United Nations devoted exclusively to the welfare of children, helped 55 million children and mothers in more than 100 countries toward better health and longer life.

One of UNICEF's ways of receiving contributions is through the annual sale of Christmas cards and note paper. The 14 million cards it sold in 1959 enabled it to furnish enough DDT to protect 6 million children from malaria for a year and enough vaccine to inoculate 75 million children against tuberculosis. From the sale of 1 box of cards UNICEF can provide the vitamin supply needed by a young mother for 100 days; from 2 boxes it can give 70 children a daily glass of milk for a week or free 20 children of yaws; from 10 boxes it can provide antibiotics to cure 25 children of the often blinding disease of trachoma.

Designs for the cards are donated by renowned artists. This year the designs are "Los Niños" by Ted De Grazia of the United States, "Tales of Many Lands" by Adolf Zábranský of Czechoslovakia, the "Poetry of Flight" by Rufino Tamayo of Mexico, "Glad Tidings" by Marc Chagall of France, "Alpine Games" by Alois Carigiet of Switzerland, and "The Free" by Tadashi Nakayama of Japan. Because of the popularity of last year's designs, which include "Children and Birds" by Miro, these too are being offered. Cards come 10 to a box with matching envelopes ("Tales of Many Lands" includes 2 cards each of 5 designs) and are $1.25 a box except "The Free," which, since it is a special edition and large, sells for $2.50. Inside, the cards are either inscribed with "Season's Greetings" in the five official languages of the United Nations or left blank.

The United States Committee for UNICEF will gladly furnish free an illustrated brochure on the cards. Write for it to the Committee's Greeting Card Department, United Nations, New York.

Army radio series

"Topic of Conversation," the Army Recruiting Service's 13-week radio series about young people, announced by *School Life* last month, will continue through December 10. The 25-minute programs, on which panels of specialists discuss subjects of interest to young people, are carried by stations of the Mutual Broadcasting Company every Saturday at 12:35 p.m. The schedule from October 15 through November 12 is as follows:

October 15, "American youth as a consumer," by Don Layman, vice president and advertising manager of Scholastic Magazines; Enid Haupt, editor and publisher of *Seventeen*; Eugene Gilbert, market researcher; and John Beaumont, director of the Distributive Education Branch of the Office of Education.

October 22, "How serious is the delinquency problem?" by William Kvaraceus, Boston University professor; Ralph W. Whelan, commissioner of youth service and executive vice chairman of the New York City Youth Board; Louis J. Lefkowitz, attorney general of the State of New York; Andrew J. Seidler, executive director of the Youth Counsel Bureau, New York City District Attorney's Office.

October 29, "American youth ambassadors around the world," by Helen Waller, director of the New York *Herald Tribune* Forum; Gertrude Cameron of the Office of Educational Exchange, Department of State; George Edgell, assistant director of the American Field Service; and Ann Vernor, senior at Washington and Lee High School, Arlington, Va.

November 5, "The American youth as an automobile driver," by Col. Carey Jarman, superintendent of Maryland State Police; Stanley Abercrombie, assistant director of the National Commission on Safety Education; W. E. Albright, deputy director of safety for the Department of the Army; Earl Allgaier, research engineer, Traffic Engineering and Safety Department, American Automobile Association.

November 12, "Guidance — keystone in the arch of American education," by Kathryn Cook, guidance director for the Arlington County, Va., public schools; Carl McDaniels, assistant director of professional relations of the American Personnel and Guidance Association; Herman Peters, professor of guidance at The Ohio State University; Max Wise, professor of guidance at Columbia Teachers College; and Col. Robert W. Sylvester, educational liaison officer for the Department of the Army.

Topics and guests for the last four programs will be announced in our November issue.

Summer programs in Latin America

Opportunities for Summer Study in Latin America, a 68-page bulletin recently issued by the Pan American Union, presents concise up-to-date information on summer sessions, educational tours, and student work projects in such Latin American countries as Brazil, Colombia, Ecuador, Guatemala, Mexico, and Peru. The publication covers scholarships, employment, veterans' benefits, academic summer sessions, work projects, international living programs, study tours, and student vacation tours. The section on summer institutes, for instance, offers such information as name and location of institutes, dates of programs, fees, courses, credits, and where to write for additional information.

The publication sells for 35 cents a copy from the Pan American Union, Washington 6, D.C.

by KENNETH W. MILDENBERGER, MARJORIE C. JOHNSTON *and* GORDON H. FAIRBANKS

Foreign languages in Soviet schools

Although it is generally agreed that U.S. schools must meet U.S. needs and that the Soviet system of education would not serve our people, still American educators and the American public are comparing the systems and asking questions: Are Soviet schools better than U.S. schools? Are Soviet pupils learning more than U.S. pupils? To learn what Soviet schools are doing in foreign languages, three U.S. specialists in the teaching of foreign languages spent 23 days in the USSR—under the cultural exchange agreement between the Soviet and the U.S. Governments. There they interviewed 120 educators, individually or in groups, and visited institutions of various types, including 12 elementary and secondary schools, 6 teacher training institutes, 4 universities, 3 research institutes, and 4 ministries of education.

THE SOVIET UNION is revising its foreign language program in the schools. The new program is destined to begin formally this school year; but when we visited the country, in April, strenuous efforts were already under way to alter and improve instruction on the basis of recommendations appearing in the official language journal *Inostrannye iazyki v shkole* and in pamphlets prepared at the Institute of Teaching Methods.

Reason for the change was stated in a criticism in an official pronouncement, "For a Thoroughgoing Improvement in the Teaching of Foreign Languages," in the May–June issue, 1959, of *Inostrannye iazyki v shkole:*

> "It is well known that the teaching of foreign languages in middle schools has up to now been suffering under serious inadequacies connected chiefly with abstractness in teaching and with insufficient attention to the practical training of students in foreign language and the inculcation of ability to use their knowledge in practice. The middle schools up to the present time have not been supplying means to a practical mastery of a foreign language for their graduates."

The pronouncement goes on to detail the steps being taken to reform Soviet language programs. The reform was initiated in 1957 when the Ministry of Education of the Russian Soviet Federated Socialist Republic (RSFSR) commissioned the Institute of Teaching Methods—one of the eight research institutes of the Academy of Pedagogical Sciences—to work out, in cooperation with certain institutions of higher education, a new language program for the schools. (The Academy of Pedagogical Sciences is the center of educational research in the USSR. It is responsible for the development of textbooks, teaching aids, and curriculum and for the study of comparative education. It is supported by the RSFSR but it influences education in all other republics.) In March 1958 the RSFSR Ministry cleared the program that had been prepared. From September 1958 through the spring of 1960 first-year textbooks for English, French, and German, which were to be the basis of the new program, were tried out in the fifth-grade classes in a number of experimental schools sponsored by the Academy of Pedagogical Sciences. Beginning this fall, the new course of study with some revisions will go into general use in Soviet schools, systematically replacing the beginning textbook series formerly used. Meanwhile textbooks for succeeding grades are being developed or tried out.

At least four circumstances prevailing in the Soviet Union will probably hasten the effect of the new program.

1. All school students except those in some rural areas where effective instruction cannot be provided are required to take 6 years of a nonsoviet foreign language, beginning in grade 5 and continuing through grade 10, the last year of the 10-year school. Those who go on to higher education must continue language study.

2. Strict classroom discipline and hard work are routine with Soviet pupils.

3. Centralized control of curriculum, methods, production and approval of instructional methods, and teacher training make it possible to enforce reforms.

4. Soviet people, especially those in republics where languages other than Russian are spoken, are highly language conscious; many are competent in two languages and some in three or four.

In the schools we visited the teachers were already following the new recommendations. Our report of our observations is therefore essentially a description of a transitional period.

The goal of the revised program is for each student to acquire the ability to carry on simple conversations on

The authors: Both Dr. Johnston and Dr. Mildenberger are Office staff members—Dr. Johnston, as specialist in modern foreign languages and Dr. Mildenberger as chief of the Language Development Section. Dr. Fairbanks is professor of linguistics at Cornell University.

general subjects and to read simple texts without a dictionary in at least one foreign language. To achieve this goal, teachers stress practice in using the language, especially in speaking during the early stages of instruction.

Competent teachers

We were much impressed by the language competency and the personality of most of the teachers of English we observed. If, in many of these instances, the Soviets were deliberately showing us teachers they considered superior, then their best is of a very high order. We saw alert young women leading their classes in a very authentic if formal British English, young women of warm personality and good humor, faithfully adhering to their orders to get pupils to speak in English. When we had conversation with them, they easily understood us and responded readily.

We also saw teachers who, though probably highly efficient under the old style of teaching, were having great difficulty with the new. In one class the teacher spoke fluently but with a broken synthetic British pronunciation. Her pupils mimicked her so faithfully, with the typical intense raptness of Soviet pupils, that we had difficulty in understanding what they were saying.

We were reminded in this classroom of how hard it is for even a good teacher experienced in using one method to change to another. And here too we found convincing evidence that the Soviet practice of keeping the same teacher with a language class from the first year to the last is fundamentally unwise, especially when the teacher is a faulty speaker.

Instructors at pedagogical institutes, special foreign language institutes, and universities all say that the principal objective of higher education in language is the preparation of teachers, with the preparation of interpreters and translators a close second. Since these institutions have more applications for admission than they accept, their standards for admission are high.

All students admitted to a higher institution have had 6 years of language and those admitted to a language training program must complete 5 more years of concentrated language study to earn a diploma. (According to the official program they are required to have 272 semester hours for graduation, with a little more than half of these in the language they plan to teach.) With a diploma they may teach in any Soviet republic without further certification.

On the whole, the results of the teacher-training programs seemed notable, although length of time and sheer hard work should perhaps be given more credit than the quality of training. We talked at some length with groups of English majors and found them fluent and accurate in their speech. We believe, however, that more effective training might have achieved the same result in less time, though both the long sequence and the quality of results far surpass those of any typical training program for language teachers in the United States. Clearly language faculties in higher institutions are laboring within their abilities and means to turn out new model teachers with the speaking proficiency demanded by the revised program.

According to the USSR Deputy Minister of Higher Education, 12,400 of the students enrolled in college in 1959–60 were training to become teachers, translators, or interpreters of English. Such a large number of coming English teachers seems highly significant in view of three facts: (1) the USSR maintains that it has no shortage of teachers; (2) quotas of teachers in training are set by the ministers of education of the various republics, which means that the number must reflect a plan; and (3) the Lenin State Pedagogical Institute in Moscow had 230 English majors last spring but none in the third or fourth years because, according to the staff, the Ministry had not called for any freshman majors in 1956–57 and 1957–58.

The large number of students now preparing to become teachers of English may indicate that the USSR is planning to expand the teaching of English, particularly in the lower grades. Further expansion will mean a heavy concentration on English in Soviet schools, for English is already the most popular foreign language offered. According to the USSR Deputy Minister of Higher Education, about three-fourths of all students in higher education in the USSR study English; 60 percent of all language majors are in English; and there are 77 English faculties in higher institutions.

The Ministry of Education gave us no statistics on enrollment in foreign languages in elementary and secondary schools, but recent Soviet publications report that 45 percent of all pupils, excluding those in experimental and exotic language programs, study English; 35 percent, German; and 20 percent, French or Spanish (we visited no Spanish classes, nor could anyone we asked tell us where Spanish was being offered).

As we see it, the major weakness of Soviet language programs lies in the methods and materials being used, for they severely limit the effectiveness of programs, however proficient teachers may be in the language they teach and despite the advantages of long sequences and disciplined students. The weakness is understandable, for the traditional analytical method is not easily adapted to teaching language as communication, and the new materials soon to go into general use still bear a heavy freight of abstract analysis.

Textbooks, auxiliary instructional materials, techniques, and methods are all universally prescribed and used. The educators who are responsible for developing them and for pedagogical research are either unable to free themselves from the analytical method or unaware that the teaching of the spoken language may call for a wholly different concept of language and pedagogy. Soviet researchers and phonetics teachers are familiar with American structural linguistics—a science that has contributed

much to the philosophy and techniques of audiolingual teaching in United States schools—but no one we questioned thought that linguistics had any pertinence to classroom teaching.

We noted one other significant limitation, by our standards, in Soviet instructional materials: Language is taught as a linguistic code and neither textbooks or supplementary teaching materials used in the lower grades contain information on the culture of the people whose language is being taught. For example, in his first years of studying English a Soviet pupil learns nothing of the culture of the people who speak English. In his later years he reads American and British fiction and nonfiction of the 1930's or earlier. We were told that beginning textbooks exclude information on foreign culture to avoid burdening pupils with both a new language and a new culture.

In most higher education institutions we visited we saw language laboratories well equipped with magnetic tape recorders and players but with varying physical arrangements. We also saw some interesting operations. Although both instructors and students take laboratory equipment seriously, we doubt whether it is being used as effectively as possible. We saw no audio material keyed to standard classroom instructional materials, and we assume that the USSR produces none, but we heard that it imports commercially available language tapes and transcribes foreign radio broadcasts on tapes for use in language laboratories. With few exceptions, we thought the sound reproduction by electronics equipment of poor physical quality but that may have been the result of poor maintenance.

None of the grade schools we visited had language laboratories, and we saw only one grade school teacher using a tape recorder. We noticed, however, that grade school teachers generally were making good use of visual aids, particularly posters and projected slides, to stimulate pupils to speak on a given subject. Apparently motion picture films are not widely used in either grade schools or higher institutions.

We were particularly eager to learn the results of Soviet experiments with language instruction in the lower grades. Fortunately, we were able to observe classes in nine schools where children begin to study a foreign language at various ages—some in a boarding kindergarten at 5 years; some in the third grade at 9 years. The languages now being offered include Arabic, English, French, Hindi, Urdu, and Russian—the last beginning in the second grade for all children in non-Russian-speaking republics.

Strong support

There are indications that persons high in authority are interested in these pilot programs in the early grades, are willing to invest heavily in them, and are making it possible for them to operate under the best possible conditions. The teachers are good; discipline is good; the children are naturally receptive and enthusiastic. And the programs are getting good results. Children are making substantial progress in learning to speak a foreign language and considerable progress in reading and writing.

The pride with which Soviet officials showed us these classes suggests that they already have confidence in their success. It seems very likely, judging from the number of students now in training to become teachers of English, that the Soviets plan to expand the English program in the lower grades.

We observed classes in a Moscow boarding school where children begin to study Hindi and Urdu in the second grade and three schools in Tashkent where they begin Arabic in the third grade. The Tashkent classes were of a superior order, taught by effective and linguistically competent young women who had been trained at the nearby State University of Tashkent.

In earlier issues of School Life

The Russian Race for Knowledge, by Lawrence G. Derthick, June 1958, pp. 3–4.

Through Soviet Eyes: Report of U.S.S.R. team of educators on their visit to U.S. schools, January-February 1959, pp. 8–10, 23.

Soviet Educational Research: Its Organization and Tasks, by William K. Medlin, October 1959, pp. 18–21.

Science and Mathematics Education in the U.S.S.R. Today, by Clarence B. Lindquist, November 1959, pp. 8–12.

Practical Work—An Essential Part of Soviet Education, by Marshall L. Schmitt, November 1959, pp. 13–17.

According to the Deputy Minister of Higher Education, oriental languages are taught in the State universities of Moscow, Leningrad, Tbilisi, Tashkent, Baku, Yerevan, and Stalinabad. We asked to visit higher education classes in oriental languages, but were given no opportunity to do so. We surmise, however, that Soviet institutions offer fewer programs in Asian and African languages than American universities, that their classes are generally small, and that language teaching is highly conservative but changing.

We agree that our visit to the USSR was profitable. Although we were not given all the information we wanted, did not visit as many classrooms as we wished to, we were treated with professional courtesy wherever we went and sometimes with sincere cordiality, and we learned enough to make some comparisons and to draw some conclusions. In two ways, at least, the U.S. and the USSR are alike. Both recognize that a strong language program in schools and colleges is necessary to national and international progress. Both are supporting a reform program.

by WILLIAM B. RICH

State approval and accreditation of public schools

IT hardly seems necessary to say again that State governments, though they have delegated broad responsibility to local units for public education, have retained responsibility for the quality of education. But considering the temper and volume of public discussion of quality and standards of education, State educators might profitably remind the public of the facts: Authority to maintain quality in education is fixed by State law, responsibility is placed in State agencies, standards have been set, and machinery has been established to insure that standards are met.

State law vests the State board of education, the chief State school officer, or the State department of education with responsibility for maintaining quality. Usually State departments fulfill this responsibility, at least in part, through their programs of approval or accreditation of public schools. They use such programs in three ways: In administering specific statutes requiring approval by the State department; in stimulating, encouraging, and assisting local school authorities in improving their facilities and programs; and in recognizing, for the benefit of all concerned, that a school or school system is attaining a certain level of quality.

States vary in the names they give to these programs, but many use the terms "approved" or "accredited." There is, however, no general agreement among States on the meaning of the words. What one State calls accreditation a neighboring State may call approval. As the word "accreditation" is used in higher education both the public and the profession recognize it to mean that a school or other educational institution has met certain standards of an agency or group. For example, it is used by regional associations of colleges and secondary schools in their listing or endorsements of high schools and colleges that have met their standards, and by professional groups and associations in listing colleges that meet their standards of training for particular professions.

In listing public schools, principally grades 1–12, that meet specific standards, only about half the States use the word "accredited" in the same sense. Other States use such terms as "classified," "registered," "recognized," "commissioned," "chartered," "standardized," and "approved." Such wide variation in terminology makes it difficult to determine the extent of State approval or accreditation of public schools throughout the Nation.

There may, however, be closer agreement in the use of the terms "approval" and "accreditation" among the States as they adopt the definitions for these terms which the Council of Chief State School Officers has included in a recent policy statement. They are defined as follows:

> *Approval* is defined as an official act of the state department of education certifying that a school or school system complies with laws, rules, or regulations for administrative purposes. *Approval* should be mandatory in some instances and may properly be voluntary in others. In either case, the legal basis for the approval may be a statute or regulation of the state board of education having the force of law.
>
> *Accreditation* is defined as an official decision by the state department of education that, in the judgment of the department, a school or school system has met the standards of quality established by the state. Accreditation may be based on minimum requirements only, or on a system of classification reflecting higher levels of adequacy. Unless made mandatory by state statute or regulation, accreditation should be voluntary on the part of local schools or school systems.[1]

The State education agency usually works with at least one private accrediting agency. This is generally the regional accrediting agency for secondary schools. Of the six regional associations of colleges, five include secondary schools in membership, four accredit secondary schools, and one has begun to accredit elementary schools.

Dr. Rich, Office specialist for State education programs, has recently completed a study of the organization, administration, and function of State approval and accreditation programs, one of the Office series on the responsibilities and services of State departments of education. Copies of his report, Approval and Accreditation of Public Schools, the Responsibilities and Services of State Departments of Education *(Misc. No. 36, OE–20013), are available from the U.S. Government Printing Office for 40 cents each.*

[1] *Approval and Accreditation of Public Schools, Responsibilities of State Departments of Education,* Council of Chief State School Officers, Washington 25, D.C., 1960.

School membership in a regional accrediting association is voluntary.

National accrediting groups are concerned with colleges and universities, including the accreditation of professional departments and colleges, not with elementary schools, secondary schools, or junior colleges. Although the American Association of Junior Colleges publishes an annual directory, it does not act as an accrediting agency.

State practice varies not only in use of terms but also in delegation of authority, in purpose, and in administrative procedure. State legislatures delegate authority to approve or accredit schools to the State board of education in 27 States, to the chief State school officer in 6, to the State department of education in 3, to the State board *and* the chief State school officer in 8, to the State board *and* the department in 2, and to all three in 4. (See table.)

Forty-four States have published manuals of the standards established as a basis for approving or accrediting schools. In both form and content these manuals reflect the intent of State officials to be helpful, stimulating, and encouraging to schools seeking approval or accreditation—not to lay down inflexible regulations.

Less than half the manuals spell out specifically the purposes of approval and accrediting programs. The following statements quoted from State manuals are typical of those that do.

Arizona

. . . high schools have been classified for the purpose of accrediting work done in them for college entrance.

Colorado

The purposes of the program for accrediting Colorado schools are to assist schools in the maintenance of high educational standards and to encourage the continuous improvement of educational facilities and program . . .

Maine

Approval and accreditation, the dual evaluation of Maine secondary schools, is designed to improve the quality of the education offered. All schools that desire recognition for attendance, tuition or subsidy purposes must be approved. Accreditation is in addition to approval and is purely voluntary. However, such accreditation does give the applying school an opportunity to compare its educational offerings with certain recognized standards, thus providing an evaluative procedure that should be of assistance in appraising the functions and success of a good secondary school.

Nebraska

. . . Experience has demonstrated that an approval and accreditation program which establishes appropriate and reasonably high standards of attainment serves to assist schools in the maintenance of high educational standards and in the improvement of educational programs . . .

. . . The approval category is the compulsory one and has to do with minimum programs. Accreditation is extra-legal and, therefore, optional. The purposes of accreditation are to recognize excellent work and to stimulate the continuing growth and development . . .

North Carolina

The main purpose of accreditation is to promote the best possible conditions in the school as a whole to the end that maximal, desirable results for all boys and girls may be achieved.

West Virginia

. . . The underlying reason for standards is that they act as a guarantee of worthwhile values in an educational program. They are expected to serve as an upgrading force on our schools to result in the best possible program of education for children and youth.

In the main, then, States administer approval and accreditation for these purposes:

(1) To improve the quality of education or educational opportunities

(2) To insure maintenance of a minimum educational program throughout the State

(3) To point the direction of the State's educational program

(4) To enable school districts to collect tuition for nonresident pupils

(5) To assist high school graduates seeking admission to college

(6) To enable a school to qualify for State financial aids of various types

(7) To give the public a means of judging or comparing schools.

A number of States both approve and accredit schools. Approval is usually of a lower level than accreditation, for approval may include only a review of records and reports for specific items required by statute for approval, such as length of school session, courses offered, or number of teachers; whereas accreditation may require the exercise of professional judgment in evaluating the administration, facilities, and program of a school, including the instructional program and the philosophy and objectives of the school.

In some States the approval or accreditation program is part of the administration or regulation of State-aid programs. In others it is entirely apart from financial aid and is used primarily to encourage local schools to improve their programs.

Approval or accreditation may indicate that a school or school system has met minimum standards set by the State for its schools, or that a degree of "quality" has

State authority to approve or accredit schools

State	Delegated by State statute to—		
	State department of education	State board of education	Chief State school officer
Alabama		x	x
Alaska			x
Arizona	x	x	x
Arkansas		x	
California	x	x	
Colorado		x	
Connecticut		x	
Delaware		x	
Florida	x	x	x
Georgia		x	x
Hawaii	x		
Idaho		x	
Illinois			x
Indiana		x	
Iowa		x	x
Kansas			x
Kentucky		x	x
Louisiana		x	
Maine		x	x
Maryland		x	
Massachusetts		[1]	[1]
Michigan	[2]	[2]	[3]
Minnesota		x	
Mississippi	[4]	[4]	[4]
Missouri		x	
Montana		x	
Nebraska		x	
Nevada	x	x	
New Hampshire		x	
New Jersey		x	
New Mexico		x	
New York	x	x	x
North Carolina	x	x	x
North Dakota			x
Ohio		x	
Oklahoma		x	
Oregon		x	
Pennsylvania	x		
Rhode Island		x	
South Carolina		x	
South Dakota			x
Tennessee		x	
Texas		x	
Utah		x	x
Vermont		x	
Virginia		x	
Washington		x	
West Virginia		x	x
Wisconsin	x		
Wyoming		x	

been obtained according to State standards for particular categories. Twenty-nine States use only one classification in their approval or accreditation of schools. Several of these States approve schools for limited purposes; others have a broad program with standards or criteria designed to maintain all their approved schools at a minimum level of "quality." Eight of these States indicate by use of terms such as advice, warning, conditional, or probationary that a school is not meeting the standards for full accreditation.

Several States differentiate between the quality of schools or school programs either by approving some schools and accrediting others or by classifying them under two or more accredited categories. For example, four States classify schools on two levels of quality by using the words "approved" and "accredited" as separate categories, and nine States on two or more levels by using such words as "class A," "class AA," "superior," "accredited," and "first class."

Recently some States have begun to accredit school systems (or districts) instead of, or in addition to, individual schools. Among these States are Illinois, Iowa, Kentucky, Missouri, Nebraska, Texas, and Wyoming. Although Kentucky is not yet implementing all of its new program, the plan provides for accreditation of both districts and individual schools.

States are accrediting school districts for several reasons, including these: To encourage more nearly uniform application of local resources throughout the district or to prevent a system from building up its high school at the expense of its elementary school; to prevent serious deficiencies at one or more schools from lowering the educational level of the entire district; and to publicly recognize the efforts of school districts to provide a balanced program. Standards for accrediting districts specify requirements for districtwide services, which are not usually included in programs for individual schools.

Various States use, or have used, State committees or commissions in their approval or accreditation program. A number of States have used specially appointed committees for the development or revision of their programs. Frequently these committees are discharged upon completion of their assigned task; occasionally they are retained as advisory committees for periodic review of standards and criteria for the purpose of recommending changes in the accreditation requirements.

There are seven States which have permanent State

Continued on page 16

[1] Massachusetts—Vocational schools and high schools in superintendency unions only. Junior colleges are approved by the board of collegiate authority.

[2] In the form returned by the State there was no indication of State approval or accreditation.

[3] Michigan—Approves schools only for the collection of tuition from nonresidents.

[4] Mississippi—Approval for State funds. Accreditation is not mandatory for minimum foundation funds.

by JAMES L. TAYLOR

Flexibility in school facilities

A school plant should fit the needs of the school and community programs and promote the welfare of its occupants. As the school program changes and school enrollments vary, planners and designers of school plants are challenged as never before to keep pace with developments in education.

School plant planners who understand the school program today and foresee probable future change can assist the architect in designing flexible school facilities; that is, grounds, buildings, equipment, and furniture with the capacity for adaptation to meet program needs.

A flexible plant offers many advantages. It is expandable in that exterior additions can be made to meet increases in enrollment and program. It is convertible in that space and equipment can be adapted to meet program changes. It is versatile in that multiple use of space can facilitate the organization of the program and insure efficient utilization of the plant.

In planning and designing a flexible school plant, both school officials and the architect should keep three things clearly in mind:

- The educational program that is to be served
- The trends toward changes that are apparent
- The specific components of the physical environment that greatly influence the program and the welfare of pupils—services such as the heating, ventilation, and lighting systems; structural systems; school site; arrangement of space; design of building; and furniture and equipment.

They should remember, too, that a school plant is not necessarily good just because it is flexible. The worth of flexibility in any school should be judged by its contribution to the program. Providing flexibility for a program that does not change would be impractical and require an unjustifiable expenditure of funds.

Planners and designers can anticipate some of the changes that will take place during the 50- to 60-year life expectancy of a school building—for example, changes in course offerings, in character and size of population, and in community use of the school plant. Admittedly they cannot foresee all changes, but they can provide for some of them. If the original plans provide for expansion, additions and alterations can be made at less expense than otherwise and without resulting in a patched-up, impractical building.

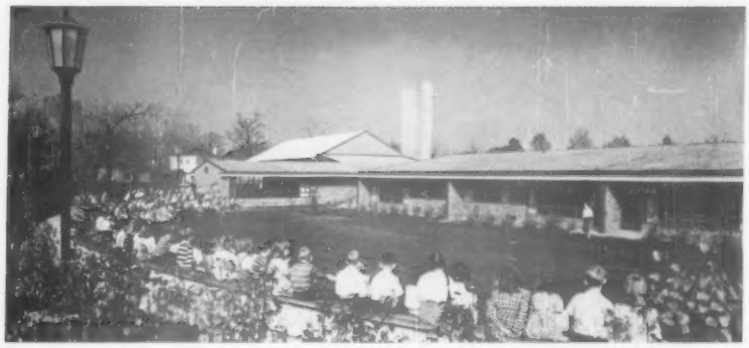
Before alterations or additions are made, school officials should study the program and population trends, for in a community of increasing population such a study might indicate that it would be wiser to build a new plant than to expand an older one beyond the reasonable capacity of its size and site. It is even more important for them to study population trends before planning a new building.

Wise school boards select locations and sites long before the community requires them and demand that planners take these sites into consideration as they work on the designs for flexible buildings. Naturally such master long-range plans should conform to school board policies on the size of schools.

School board policies and long-range plans may influence decisions on facilities. Policies on the ultimate size of new schools, the location and size of sites, and the remodeling of old buildings help determine plant characteristics. For example, the size and

Science work counters equipped with utilities and located on the perimeter of the room facilitate experimental methods of instruction for small groups; movable tables and chairs make discussion easier.

MR. TAYLOR, Office specialist in planning school buildings, has been in public school work for more than three decades, as classroom teacher, secondary school principal, superintendent of schools, and staff member in the Arkansas State Department of Education. Since he came to the Office, in 1951, he has been the author or co-author of six publications on functional planning of school plants.



Outdoor facilities convenient to classrooms in the one-story building make indoor-outdoor activities easier.

shape of a site may necessitate the placing of a building in such a way as to make expansion difficult.

Planners should not overlook the requirements of teaching aids, such as television, film projectors, and tape recorders. Such equipment requires special devices for light and sound control, and special space for use and for storage. Because some of these aids can be used to the best advantage in the classroom, where they can be drawn upon at the most suitable moment in a lesson, many schools are designing classrooms to accommodate them.

Many of the ideas and practices now being discussed—ungraded primary schools, accelerated classes, master teachers for large groups, the teaching of large groups by television, for example—suggest to planners that tomorrow's schools will need flexible facilities. Schools can be so constructed, by arranging space logically and by providing movable partitions, that spacious rooms can be created when they are needed without excessive effort and waste of instructional time.

Where school sites are large enough for spread-out, one-story buildings, there are greater possibilities of providing for flexibility, for greater variety in programs, and for improved comfort and health of children and teachers. For example, doors leading directly from regular classrooms to outdoor classrooms, enclosed walkways, and playgrounds encourage outdoor activities and provide the means for quick evacuation in emergencies.

Long-range planning and the selection of adequate school sites are becoming ever more important and more closely allied with functional planning as the schools emphasize the use of outdoor facilities.

Since planning and designing flexible facilities is not an easy job, architects, school administrators, classroom teachers, and lay citizens should work at it cooperatively. Each has a specific part in the process. The leader or consultant usually coordinates the activities of the planners and the designers, provides a meeting place, working materials, and facilities for conducting research.

The architect is responsible for seeing that the flexible facilities provided can be used without hindering instruction by interfering with good sound control, light, safety, ventilation, and heat and without endangering the welfare of pupils and teachers.

In the end the planners, particularly the educators, bear the major responsibility for planning.

If teachers want child-sized, movable furniture, movable casework that can be used for dividers of the classroom, convenient and adequate storage, doors leading from indoor to outdoor classrooms and playground, they must make their wishes known to the architect in clear educational specifications. Good educational specifications describe in detail the facilities needed in terms of the educational philosophy, the activities to be conducted, and pupil characteristics and needs. If educators describe their program carefully, the architect will readily understand their needs and gladly work with school planners.

Some committees have found it helpful to follow a set procedure similar to this one. A committee appointed by the local school board works out educational specifications, turns them over to the architect, explaining to him the school needs. The

Adequate space, good light, and movable furniture make possible a flexible program.

architect prepares preliminary sketches. The committee again meets with the architect to consider his sketches and to decide whether he has interpreted their plans properly. After the committee is satisfied with the sketches and the board has approved them, the architect makes the final drawings. But no matter what procedure is followed, school staff, members of the community, and architect should work together.

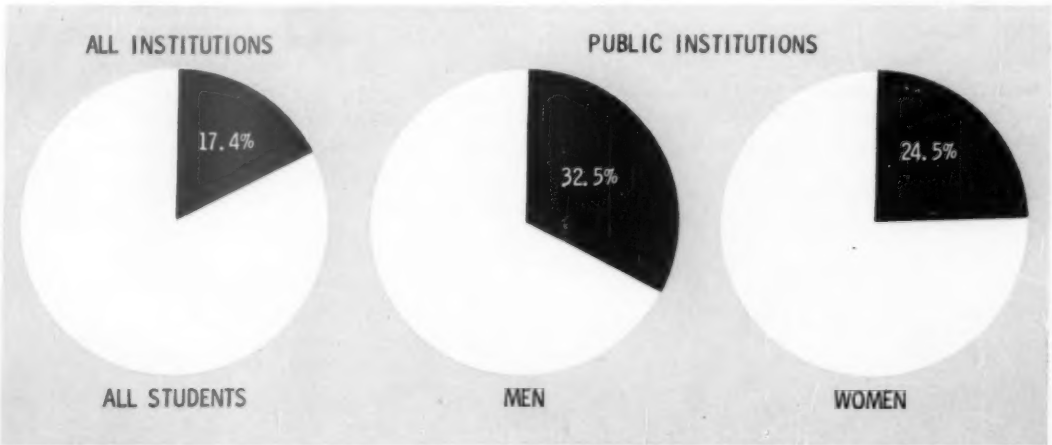
Among the features for which communities provide in their schools today to permit flexibility are the following:

Suitable and accessible site
One-story, open-end, fluid buildings with inside-outside coordination
Areas suitable for small, medium, and large groups
Child-sized, movable furniture and equipment
Multiple use of rooms and other areas, inside or outside
Logical arrangement and grouping of related areas
Functional storage
Direct passageways for circulation
Movable casework, adjustable shelving
Folding stage and folding bleachers
Non-weight-bearing partitions
Logical location of buildings on site
Adequate provision for light, heat, ventilation, and sound control
Covered play areas
Folding maps, charts, swinging globes, reversible boards
Walls with movable panels that open
Warm, attractive floors
Entrances and utilities convenient for community use
Ramps, handrails, and transportation convenient for handicapped children.

Change in educational planning is inevitable and desirable, for it reflects the advancing and expanding ideas of our times. School facilities may encourage or hinder progress. Buildings should have the capacity to accommodate any changes in curriculum that will result from economic, social, and technical developments and any changes in school practice that will result from developments in teaching methods and material.

Land-grant institutions: Enrollments

LAND-GRANT colleges and universities are taking a large share of the growing enrollments in our institutions of higher education. In the fall of 1959 as many as 17.4 percent of the students in *all* institutions of higher education, public and private, were enrolled in the 68 land-grant colleges and universities. In other words, one out of every six students was there. Of the students in *public* institutions, nearly one-third of all the men and nearly one-fourth of all the women were in land-grant institutions. (Elsewhere in this issue is a story in pictures that not only recalls the modest beginning of the land-grant colleges and suggests the breadth of their programs today, but gives some of the history that lies between the beginning and the present.)



Enrollments in land-grant colleges are represented by shaded areas.

by MARSHALL L. SCHMITT

Industrial arts education: A call to the profession

THE 16 industrial arts educators who came to Washington in June to a small 2-day conference, called by Commissioner Derthick, were prepared to work. All had accepted responsibility for specific jobs: eight presented working papers on major problems in industrial arts education and the others served as discussion leaders or resource persons.

Because all participants had been identified as leaders in their profession by national organizations or individuals closely associated with industrial arts and had been selected from different geographical sections of the country, their ideas and conclusions should have weight with other members of the profession. Furthermore, their ideas should be of widespread interest because they deal with problems that had been identified by many national organizations and individuals.

The questions listed here represent a synthesis of problems and issues identified:

1. What is the place of industrial arts in the American culture?
2. What objectives should be emphasized?
3. What guidelines should be followed in determining curriculum content?
4. What are the lessons for us in Soviet polytechnic education?
5. What is the relation of industrial arts to other courses in the curriculum?
6. What changes are needed to meet the needs of both the gifted and the slow learner?
7. What curricular changes should be made to best reflect technology and the needs of the students?
8. What competencies does the industrial arts teacher need?

At each of the morning and evening sessions a working paper on one of these questions was presented and discussed, with one central purpose: to find means of improving industrial arts education. A full report of the conference, now being prepared, will include all working papers, summaries of the discussions, and the recommendations. (Watch *School Life* checklist of Office publications for the publication date.) In the meantime, the following statements digested from the working papers should give the reader an idea of the atmosphere of the conference and the thinking of the participants.

¶ *On industrial arts in our culture, by R. Lee Hornbake, University of Maryland*

As a subject in the curriculum, industrial arts deals with a segment of man's knowledge representative of his finest achievements—his ability to create, and to perform techniques. The case for industrial arts is that it presents, at various maturity levels, a challenge to certain abilities which part of the population possesses.

¶ *On objectives, by Ivan Hostetler, North Carolina State College*

Education in all branches of learning—the humanities, theoretical and social sciences, and applied arts and sciences—contributes to the integration of an individual in society. Industrial arts is similar to other branches whose function is the development of meaning through application to occupational and productive activities. To be educated, a student must understand not only the theoretical aspects of science or art but also the relationships among them and their purposes. Study of the application of art, science, economics, sociology, and other subjects to engineering, planning, and production gives meaning to other subjects, helps a student to select an occupation and prepare for it and to appreciate beauty in ceramics, silverware, furniture, and graphic arts as well as the precision products of modern industry.

Four basic objectives should be emphasized in industrial arts in secondary schools:

1. To help students acquire an understanding of industry and its place in our culture.
2. To discover students with talents in the technical fields and applied sciences and help them develop their talents.
3. To develop technical problem-solving skills related to materials and processes.

Dr. Schmitt, Office specialist for industrial arts, organized the conference, and much of its success resulted from his careful preparation.

In addition to the men who prepared working papers the following men participated in the conference: Rodger H. Hicks, Arlington (Va.) Public Schools; Paul Hiser, State University of New York; Edwin L. Kurth, Florida State Department of Education; George Male, U.S. Office of Education; Carl W. Neuscheler, Brockport (N.Y.) High School; Charles E. Bish, National Education Association; Leonard W. Glismann, Utah State Department of Public Instruction; and John Fisher, New Hope (Pa.) High School.

4. To give each student an opportunity to acquire a measure of skill in the use of common tools and machines.

Supplementary objectives should be developed for various age and grade levels and for the gifted and slow learner.

¶ *On curriculum guidelines, by Delmar W. Olson, Kent State University, Ohio*

Guides determine directions. In industrial arts we can choose those which look backward or those which look ahead. If industrial arts is to make a significant contribution to education in the years ahead we must choose new guides.

¶ *On Soviet polytechnic education, by Marshall L. Schmitt, Office of Education*

Soviet educators believe that the polytechnic or practical arts course is as vital as mathematics, science, foreign languages, or any other academic subject and require all pupils to take it.

The Soviet idea that there is no dividing line between pure and applied physics or pure and applied mathematics puts science, mathematics, and practical arts—the users of these disciplines—on a more nearly balanced basis in their schools. Does this not suggest to us that industrial arts courses, which deal with technology, should be more closely connected with mathematics and science and be made more experimental?

¶ *On relation to other subjects, by Robert L. Woodward, California State Department of Education*

Industrial arts have reinforced, applied, and extended language arts through the use of instruction sheets, technical and other reference books, and the introduction of words used in industry; science, through activities based on scientific principles and instruction related to science; and mathematics, through activities requiring mathematical processes.

¶ *On the gifted and slow learner, by John A. Jarvis, Stout State College, Wisconsin*

High school industrial arts courses should be planned for students of varying abilities and objectives, just as mathematics courses are. Instruction in drafting and shopwork for students who will enter engineering college should not be the same as that for students who will go into a vocational training program.

¶ *On curriculum changes, by Morris J. Ruley, Tulsa, Oklahoma, Public Schools*

We should strengthen or revise those parts of our program that contribute to our aims and eliminate those that do not. We should be discriminating, however—not throw out everything we've been doing. Fifty years of steady progress in industrial arts education should not be overlooked.

Some schools are including crafts at the expense of solid subject matter. The amount of woodwork, for example, is out of proportion to its value.

The term "industrial arts" should be used to describe the course, not "shop."

A corner of the conference table: Facing, left to right, Edwin L. Kurth, Ivan Hostetler, Charles E. Bish, John A. Jarvis, Delmar W. Olson, and Rodger H. Hicks; with their backs to the camera, M. Ray Karnes, Leonard W. Glismann, and Albert L. Pelley (research assistant, Office of Education).

¶ *On teacher competencies, by M. Ray Karnes, University of Illinois*

Papers prepared for this conference and recently published articles raise two questions: Can one teacher be prepared to teach all industrial arts effectively at all age, grade, and ability levels and achieve both primary and secondary objectives? Can a competent teacher be prepared in a 4-year teacher education curriculum?

We can restate these questions positively: We must assume that the special competencies needed by teachers of each phase of industrial arts should be identified; that specialized preparation should be offered; and that teacher preparation should require a minimum of 5 years.

Every industrial arts teacher should be a professional student of technology, applied mathematics and science, social and behavorial sciences, industrial and economic history and geography, industrial sociology, and industrial psychology. In addition to studying these subjects, he should acquire technological experience.

CLEARLY THE PARTICIPANTS considered the Office conference as only a beginning of better education in industrial arts, for they realized that little progress could be made without the support of all teachers. They therefore recommended that the Office of Education issue a call to the profession to stimulate teachers to attack their professional problems vigorously and that State and local groups throughout the country hold a series of small conferences. Groups of teachers working together to clarify issues and exchanging ideas could, they believed, move the profession forward on a sound basis; and they recommended that teachers set up pilot programs to test ideas coming out of these conferences.

Continued from page 10

State Approval

committees or commissions to which some responsibility for the administration of the State accreditation program is delegated. Five of these committees are organized with lay and professional membership, but only three of them are officially responsible to the State board of education. The other two are independent agencies which accredit schools after considering the recommendations of their State departments of education.

A continuing State accrediting committee or commission made up of representative, mature, and responsible persons can contribute substantially to the State program by reviewing department recommendations before they are presented to the State board, an action which aids the department and strengthens the recommendations when they are presented; by interpreting the program to the public; and by helping to establish a new or revised program and making public acceptance easier.

ALL THESE PROGRAMS add up to one nationwide effort to continuously improve public education.

Research Reports at 58 Libraries

FINAL REPORTS of projects under the Office of Education's cooperative research program can now be borrowed from any one of 58 libraries—38 at colleges and universities—under a Library of Congress project. Only the recently completed projects are available now; they will be listed in these pages next month; supplements, later. Here, the libraries, in alphabetical order by State:

Univ. of Alabama
University, Ala.

California State Library
Sacramento 9, Calif.

San Diego State Coll.
San Diego 15, Calif.

Univ. of California
The General Library
Berkeley 4, Calif.

Univ. of California
Los Angeles 24, Calif.

Library of Congress
Washington 25, D.C.

Florida State Univ.
Tallahassee, Fla.

Univ. of Hawaii
Honolulu, Hawaii

Midwest Inter-Library Ctr.
Chicago 37, Ill.

Northwestern Univ.
Evanston, Ill.

Univ. of Chicago
Chicago 37, Ill.

Univ. of Illinois
Urbana, Ill.

Indiana State Library
Indianapolis 4, Ind.

Indiana State Teachers Coll.
Terre Haute, Ind.

Indiana Univ.
Bloomington, Ind.

Purdue Univ.
Lafayette, Ind.

Univ. of Kansas
Lawrence, Kans.

Enoch Pratt Free Library
Baltimore 1, Md.

Johns Hopkins Univ.
Baltimore 18, Md.

Detroit Public Library
Detroit 2, Mich.

Kalamazoo Coll.
Kalamazoo, Mich.

Michigan State Univ.
East Lansing, Mich.

Univ. of Michigan
Ann Arbor, Mich.

Univ. of Minnesota
Minneapolis 14, Minn.

Kansas City Public Library
Kansas City, Mo.

Univ. of Missouri
Columbia, Mo.

Univ. of Nebraska
Lincoln 8, Nebr.

Dartmouth Coll.
Hanover, N.H.

Princeton Univ.
Princeton, N.J.

Rutgers Univ.
New Brunswick, N.J.

Brooklyn Public Library
Brooklyn 17, N.Y.

Columbia Univ.
New York 27, N.Y.

Cornell Univ.
Ithaca, N.Y.

New York Public Library
New York 18, N.Y.

United Nations Library
New York, N.Y.

Duke Univ.
Durham, N.C.

North Carolina State Coll.
Raleigh, N.C.

Kent State Univ.
Kent, Ohio

Miami Univ.
Oxford, Ohio

Oklahoma State Library
Oklahoma City 5, Okla.

Oklahoma State Univ.
Stillwater, Okla.

Pittsburgh Carnegie Library
Pittsburgh 13, Pa.

Philadelphia Free Library
Philadelphia 3, Pa.

Lehigh Univ.
Bethlehem, Pa.

Penn State Univ.
University Park, Pa.

Brown Univ.
Providence 12, R.I.

Univ. of Tennessee
Knoxville 16, Tenn.

Dallas Public Library
Dallas, Tex.

Univ. of Virginia
Charlottesville, Va.

Univ. of Washington
Seattle 5, Wash.

Washington State Univ.
Pullman, Wash.

Milwaukee Public Library
Milwaukee 3, Wis.

Univ. of Wyoming
Laramie, Wyo.

Statistic of the Month

SIZE OF PUBLIC SCHOOL DISTRICTS, 1959–1960

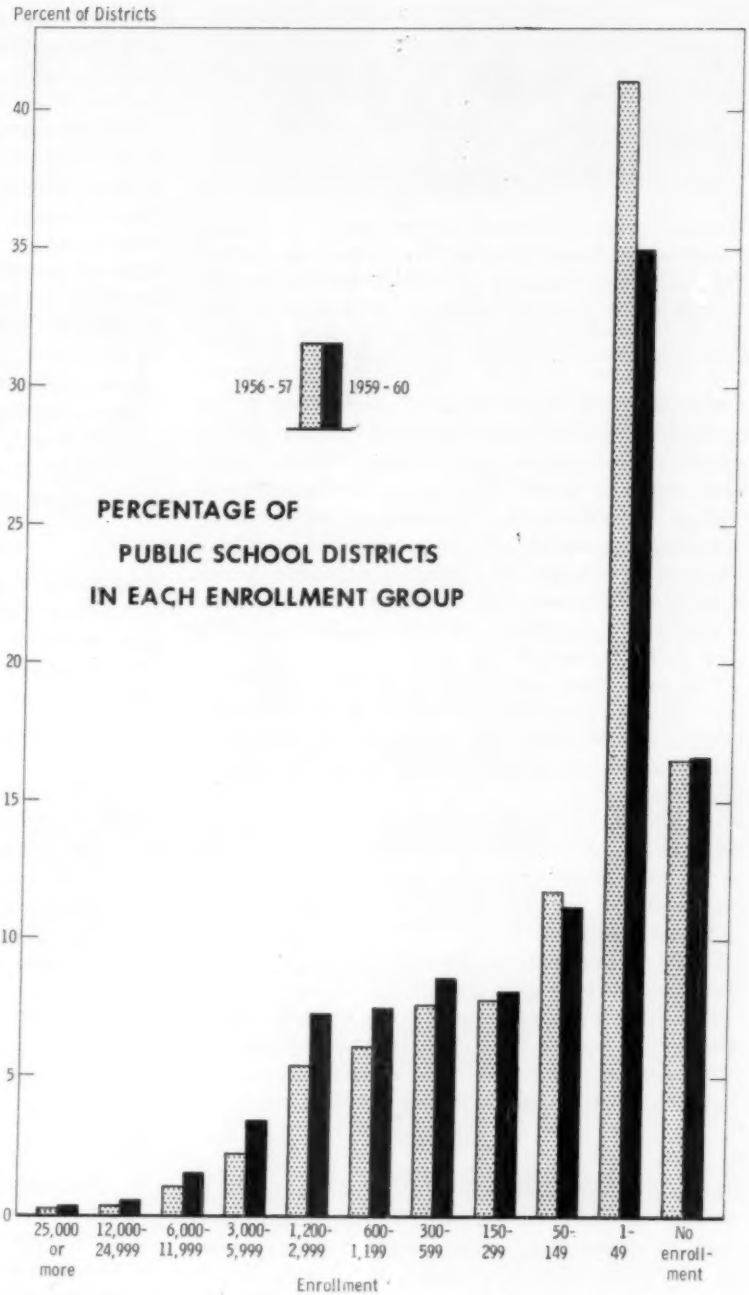
The long-term trend toward fewer and larger school districts continues. In the 3 years from 1956–57 to 1959–60 the size of school districts, as measured by number of pupils enrolled, increased considerably, as is shown in the graph below. The percentage of districts in every enrollment category from 150 pupils up increased, and the percentage in categories below 150 pupils decreased, though the percentage of nonoperating districts increased slightly. The number of districts enrolling from 50 to 149 pupils decreased from 11.7 percent of the total to 11.2 percent, and those enrolling from 1 to 49 pupils decreased from 41.1 to 35 percent.

Number and percentage of public school systems in each enrollment group, 1959–60

Enrollment group and number of pupils	Number of districts	Percent of districts
I. 25,000 or more	121	0.3
II. 12,000–24,999	230	0.5
III. 6,000–11,999	623	1.5
IV. 3,000–5,999	1,458	3.4
V. 1,200–2,999	3,082	7.3
VI. 600–1,199	3,187	7.5
VII. 300–599	3,630	8.6
VIII. 150–299	3,429	8.1
IX. 50–149	4,768	11.2
X. 1–49	14,871	35.0
0 (nonoperating)	7,029	16.6
Total, United States[1]	42,428	100.0

[1] 50 States and the District of Columbia.

Source: Bureau of the Census, U.S. Department of Commerce.



Even so, in 1959–60 slightly more than half of the legally constituted public school districts in the United States enrolled fewer than 50 pupils. Approximately one-third of these districts did not operate a school system at all but sent their pupils to other districts. Only 48.4 percent of all public school districts enrolled 50 pupils or more.

—EMERY M. FOSTER, Chief Research Studies and Surveys Section

ad Minutes

Briefly noted --- for the busy School Administrator

Material for this department is prepared in the School Administration Branch, Division of State and Local School Systems, by H. D. Evans, Jr. Contributors are the specialists in the Branch—this month, Albert L. Alford, Elmer C. Deering, R. N. Finchum, Charles O. Fitzwater, Gene C. Fusco, Peter P. McGraw, and Eugene P. McLoone.

Can school tax rates be compared? Is it possible to compare tax rates and tell how one school district's effort to support schools compares with another district's? Most likely not—even if both districts are in the same State or even in the same county. Differences in property assessment practices make valid comparisons of local effort difficult. Comparisons of districts in different States are all but impossible, for differences both in the assessment ratios and in the plans for apportioning State funds affect the millage rates in local school districts.

Now some States have begun to use reporting methods that may make comparison possible. Kentucky, New York, Oregon, and Wisconsin have recently published studies in which effective millage rates in local school districts were determined on the basis of *true value of property*. The Kentucky and New York studies compare the school tax rate with the total property tax rates of all governmental units. The Oregon report gives the property tax rates for schools only.

The New York and Oregon reports were prepared by the education association in the State; the Kentucky and Wisconsin reports, by State departments of revenue.

Each report expresses the hope that other States will follow suit and issue similar studies. The 24 States that now have on record the true value as well as the assessed value of taxable property might not find it too difficult to do.

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Streamlined attendance records. The school systems in Newtonville, N.Y., and Memphis, Tenn., are among those using machine methods in preparing attendance records. In the Newtonville system a machine processing card for each student supplements the teacher's register; in Memphis the cards replace the register. In both procedures a student's absence or tardiness is noted on a card punched with his name, grade, school, and homeroom or teacher.

At Newtonville the teacher pulls the card for each student who is out, marks it with the date, and sends it to the machine processing department located in the building. The cards are then put through an accounting machine which prepares a master absentee list. A copy of this list along with the cards is then sent to the homeroom teacher.

When the student brings in a verified excuse, the teacher completes the register entry, notes it on the card, and forwards the completed card to the machine processing room.

The Memphis procedure is different in several ways. Every month the homeroom teacher gets a fresh deck of cards, one for each pupil. She marks every card each day, even if the student is present. Since every school day is accounted for, Memphis officials have a good cross-check at the end of the month.

Under both systems, such things as class lists, homeroom registers, superintendent's reports, and principal's reports can be prepared at the end of attendance periods much more rapidly than before, with much more accuracy, and with considerable savings in teacher time.

★ ★ ★

Time and job analysis. Many valuable practices in cost accounting successfully followed for years by business officials have until recently been neglected by school officials. The Jefferson County, Colorado, school system is introducing several such practices to update its cost accounting methods. One, in particular, may be of interest to administrators.

The county is placing a job time recorder in the bus shop so that shop mechanics may record on daily cards their time, the job they are doing, and the vehicle they are working on. From the cards administrators can learn which vehicles require extensive or excessive maintenance, the amount of overall maintenance on a specific make of vehicle, the number of repeat jobs performed (for example, how many clutches have to be installed in a year), and which mechanics are best qualified to do certain jobs.

School officials use this information to determine maintenance costs and degrees of obsolescence of buses of various makes and models and as a documentary record to show manufacturers who are called in because of chronic or consistent defects or failure.

★ ★ ★

Districts that vote no. Last March *Ad Minutes* reported on the series of studies by the New York State Department of Education that attempted to describe school and community characteristics of districts that have defeated school financial referendums.

The most recent of the studies on school districts which rejected their 1959 school budgets on first presentation reveals that voters in 34 New York districts rejected budgets upon their first submission in May, June, and July of 1959.

Thirty-four is the largest number of rejections on record in the State, even though it represents only 2.7 percent of the 1,272 districts that held elections.

This 1959–60 study reinforces the findings of previous research by the State department on "high resistance" districts in the State. These studies have attributed resistance to high costs, local issues and altercations, organized opposition groups, difficulty in communication, alleged frills, and voter apathy.

The study compares conditions that influence voters in the 34 rejecting districts with those in 34 non-rejecting districts. It found that the rejecting districts (1) were more predominantly residential, (2) had more children enrolled in public schools, (3) had a more rapid increase in per pupil costs, (4) apparently had a more influential group of economy-minded homeowners and taxpayers who were successful in placing members on the board of education, and (5) were subject to greater turnover in their board members.

After the 1959 voting the State substantially increased its aid and campaigned vigorously for better public understanding of school budgets, and in the 1960 voting the number of school budget rejections was sharply reduced. The department's findings on conditions that influence voters were invaluable aids in developing antidotes and planning the campaign.

★ ★ ★

The well-kept school. Our schools are spending $1 billion each year to keep up school buildings, sites, and equipment. Maintenance costs will be even higher as new facilities are added.

These facts are revealed in the Office of Education's new publication, by R. N. Finchum, *School Plant Management: Organizing the Maintenance Program,* prepared to help the school administration organize or improve school maintenance programs. It brings together tried and proven ideas, practices, and suggestions that have been reported in professional literature.

The bulletin reminds us that a clean, well-kept school promotes health and safety and develops community pride. An efficient, well-organized maintenance program results in operating economies, averts plant shutdown, saves time, and prevents or retards deterioration and obsolescence.

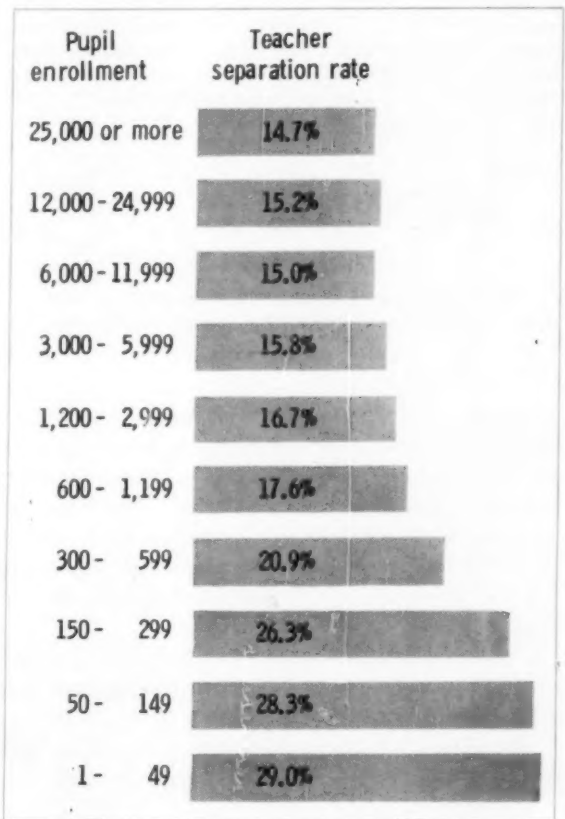
School Plant Management should be helpful to administrators who have to do the best they can with out-of-date school buildings that no longer meet the requirements of up-to-date educational programs. It suggests that they may decrease their school housing problems through efficient maintenance programs, modernization, rehabilitation, or remodeling.

For a copy send 50 cents to the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. Mention the title and office publication number, OE–21002.

★ ★ ★

Teacher turnover. Does the size of the school district have anything to do with teacher turnover? A recent study by the Colorado State Department of Education reveals that it does. In Colorado the rate of separation in the smallest districts (350 or fewer pupils enrolled) is almost double that of the largest districts (1,000 or more).

A recent Office of Education publication, *Teacher Turnover in the Public Schools, 1957–58,* by Ward S. Mason and Robert K. Bain (OE 23002, Superintendent of Documents, Washington 25, D.C., 30 cents), also touches on the problem of school district size and teacher turnover. Although this study shows that most teachers are found in the large districts, the chart that follows, adapted from one in this publication, points up a very real difficulty in operating small school districts.



New bond sales for public school purposes, July 1959–July 1960, by Moody ratings

This summary is based on sales reported by the Investment Bankers' Association. About 75 percent of the sales had a Moody rating. There was a slight decline in the average net interest cost of school bonds in the last half of the 1959–60 school year. The net interest cost on all bonds declined from 3.94 in the July-December period to an average of 3.88 in the January–June period. Rated bonds declined from an average of 3.88 in the July–December period to 3.80 in the January–June period.

Period	Average net interest cost					
	AAA	AA	A	BAA	BA	All rated bonds
1959–60						
July	3.22	3.48	3.90	4.22	4.43	3.90
August	3.71	3.65	3.69	4.26	4.08	3.81
September	3.88	3.94	4.00	4.42	4.75	4.07
October	3.03	3.38	3.75	4.21	.....	3.85
November	3.06	3.43	3.79	4.10	4.75	3.71
December	.....	3.80	3.91	4.22	.....	3.94
January	3.29	3.59	4.03	4.39	4.71	3.80
February	.....	3.60	3.71	4.09	4.48	3.86
March	[1] 4.02	3.40	3.64	4.19	4.58	3.79
April	3.18	3.63	3.79	4.24	4.50	3.83
May	3.24	3.31	3.77	4.13	4.51	3.80
June	3.02	3.66	3.62	4.12	4.30	3.73
Average	3.26	3.63	3.78	4.21	4.55	3.84
1960–61						
July	3.08	3.37	3.72	4.00	4.47	3.78

[1] All are revenue bonds of school building authorities which are usually at least 0.5 percent higher than tax obligation bonds.

★ ★ ★

Tracks. The principals in the Warren City, Ohio, schools work cooperatively with teachers in grouping secondary school students (grades 7–12) for assignment to three curriculum tracks: Fast, average, and slow. To aid them in assigning individual pupils and to insure each pupil's adjustment from one group to another, teachers and principals compile and periodically review guidance data, including the following items:

1. *Scores on mental ability tests,* which show percentile rank; mental age; and IQ for language, nonlanguage, and total mental factors.

2. *Scores on standardized achievement tests,* which show grade level for reading, spelling, language, and arithmetic.

3. *Marks in school subjects,* which show achievement in simple ratings and also reflect the pupil's personality as it affects others.

4. *Estimation of pupil by teacher,* which reports on the pupil's oral and written work, group and manual activities, work habits, common knowledge, comprehension of practical situations, and ability to express himself.

In preparing for meetings and in assigning pupils, the principals work cooperatively with teachers.

★ ★ ★

The professors meet. Among topics professors of educational administration discussed at their national meeting last August at Western Illinois University were these: Administrative theory, administrative internships, certification and accreditation, personnel administration, recruitment and selection, and values in educational leadership. One hundred and fifty-four professors who are teaching school administration in 75 graduate schools attended this fourteenth annual conference.

One point received considerable attention from the Committee on Selection and Recruitment—the fact that the public schools do not get all of the experts in school administration. Figures were presented that showed that only one-half of those receiving the doctorate in school administration actually take positions in the public schools. The remaining half go chiefly to colleges and universities, either as administrators or professors, and to service organizations.

DR. BRUNNER

One hundred years ago the land-grant college was still only a vision in the minds of some thoughtful men. The first land-grant-college bill was dead, at the hands of President Buchanan, and nearly two more years were yet to pass before a second and similar bill would run the long gamut of legislative obstacles—and win through at last, on July 2, 1862, as the first Morrill Act.

This is another way of saying that now, in October 1960, nearly two more years remain before the first century of land-grant-college history is done. But the centennial year will be officially opened in November 1962, and now is not too soon to begin reviewing all that has been accomplished in those years and to prepare ourselves for a proper and profitable observance of the anniversary. As part of that preparation, in which so many now are joining, we publish here, beginning on the next page, a pictorial review prepared by HENRY S. BRUNNER, *Office specialist in agricultural education in the Division of Higher Education.*

The land-grant-college idea inspired this painting in the central stairway of Old Main on the campus of The Pennsylvania State University. President Lincoln, whose figure dominates the scene, symbolizes—in the words of the artist, Henry Varnum Poor—"hope and faith because of his historic signing of the Morrill Act"; the young student by his side symbolizes "the full fruit of what Lincoln hoped for." The other figures represent engineering, mineral industries, home economics, and the liberal arts. Back of them all is the first Old Main.

To fulfill the promise: A Hundred Years of Growth in the Land-Grant Colleges and Universities

. . . an amount of public land . . . to each State . . . [for] at least one college . . . to teach . . . branches . . . related to agriculture and the mechanic arts . . . to promote the liberal and practical education of the industrial classes.

WHEN THE STATES accepted their grants of Federal lands under the Morrill Act, they pledged themselves to a responsibility laid upon them by the act—to provide the means of higher education for all their people.

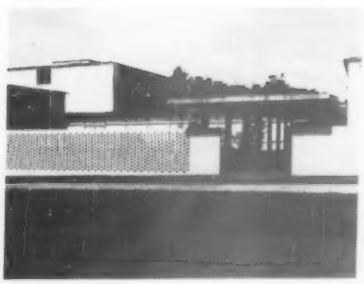
The States have differed in their ways of fulfilling this pledge, but their common goal has made them much alike. All the land-grant institutions have maintained programs of instruction and research in agriculture—programs constantly growing in effectiveness because they are closely associated with two agricultural services—the experiment stations and the extension services—coordinated in the land-grant institutions under State-Federal agreements. All the institutions also have maintained programs in engineering; and these too have grown, at once contributing and responding to a rapidly developing technology.

But it is in their providing of a *liberal and practical education for all classes of people* that the land-grant colleges have reached their greatest dimension and had their greatest influence on our culture. The nature and magnitude of their growth in this direction are shown in the pictures that follow, from 14 institutions representative not only of people and conditions in various parts of the country but also of the aggregate accomplishment of all 68 of the institutions—an accomplishment that speaks eloquently of the spirit of their administrators, faculties, and students.

CAMPUS FROM AIR

UNIVERSITY OF ARKANSAS

ON the campus at Fayetteville are many symbols, many contrasts. A new fine arts building points up the broad program of LG institutions (30 percent of all doctorates in fine arts in 1955). The old dairy building, new when the college of agriculture had only 25 students, reminds us of the basic goal—education in once-neglected fields. Old Main is the oldest building standing.



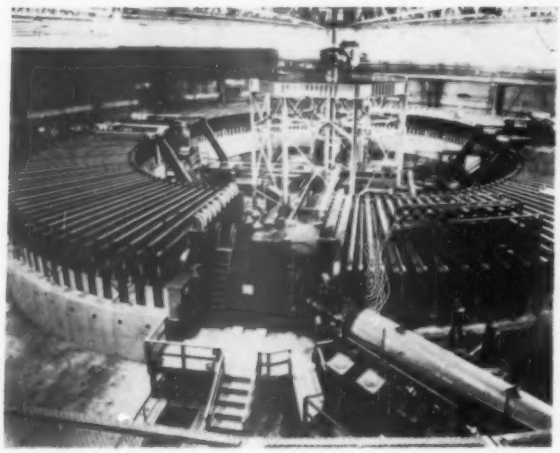
FINE ARTS 1950

OLD DAIRY 1905

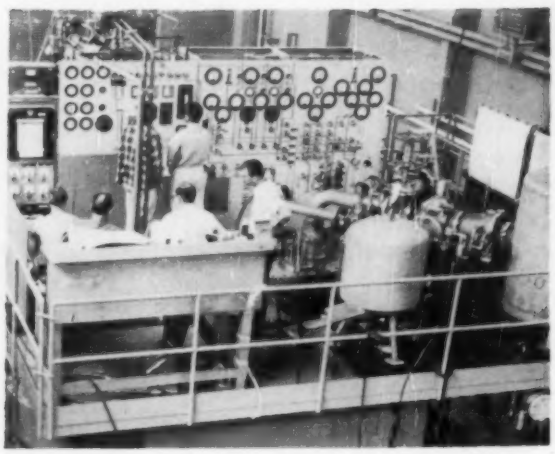
OLD MAIN 1871

BERKELEY CAMPUS

DAVIS CAMPUS



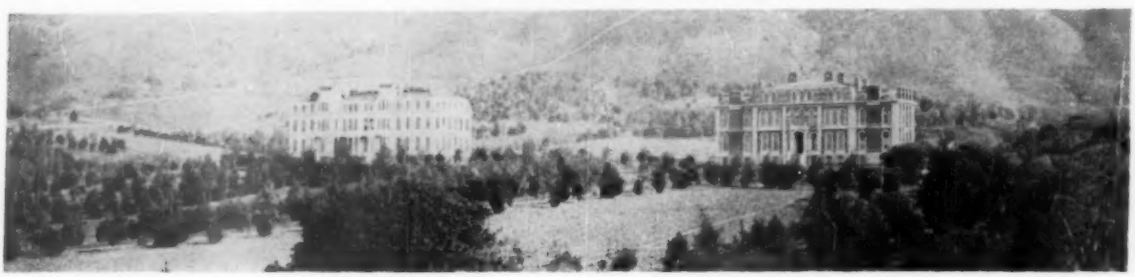
BEVATRON



BUBBLE CHAMBER

UNIVERSITY OF CALIFORNIA

AIRVIEWS of two of the eight campuses suggest how far California has come since 1873, when it opened at Berkeley with only two buildings. At Berkeley, in the Ernest O. Lawrence Radiation Laboratory, atomic research goes on under Federal grant—with atom-smasher Bevatron and a 200-ton bubble chamber. At Davis, a 3,000-acre center for agricultural education and research.



SOUTH AND NORTH HALLS, BERKELEY, 1873

TODAY'S CAMPUS

OLD MAIN

COLORADO STATE UNIVERSITY

OLD MAIN, built in 1878, today stands in the midst of a $20-million building program; and the student body, once only 19, now 6,000, is expected to reach 10,000 by 1970. In a program aimed at better meat for consumers and more profit for farmers, students and researchers in animal husbandry use such equipment as an artificial cow rumen to study digestion and a supersonic device to sound the depth of rib-eye muscle in live beef animals.

ARTIFICIAL RUMEN

SUPERSONIC TEST

CORNELL 1868

AGRICULTURE COLLEGE

CORNELL UNIVERSITY

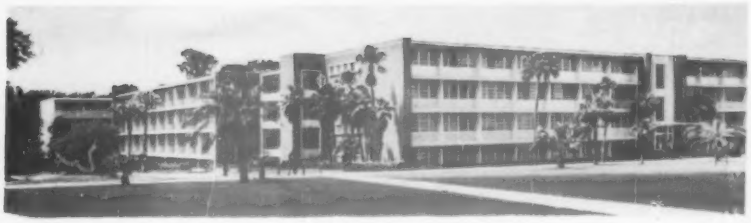
CORNELL opened in 1868 with three buildings, in which agriculture was taught along with other subjects until 1907, when it got its own Roberts Hall. Dean Bailey guided—and students drew—the plow that broke ground for it. Now the agricultural college has 14 major buildings; one of the newest, a veterinary college plant. New, too, is civil engineering's Hollister Hall. Biology students, using a coconut substance as stimulant, have managed to make whole plants from single, freely suspended cells.

GROUNDBREAKING, ROBERTS HALL, 1905

VETERINARY PLANT, 1957

HOLLISTER HALL, 1959

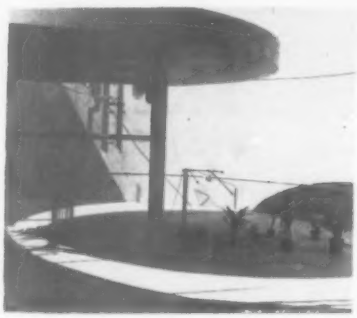
RESEARCH ON TUMOROUS GROWTH



DAN MCCARTY HALL (AGRICULTURE), UF

AGRICULTURE & HOME ECONOMICS, A&M

OLD (1911) EXPERIMENT STATION, UF



IRRADIATOR, INSIDE VIEW, UF

OLD (1918) HOME ECONOMICS, A&M

UNIVERSITY OF FLORIDA AND FLORIDA A&M UNIVERSITY

FLORIDA, like 16 other States, has two LG institutions—the University of Florida at Gainesville and the Agricultural and Mechanical University at Tallahassee. New buildings, new additions, like the cobalt-60 irradiator, largest on a U.S. campus, which at Gainesville advances research in radiation biology and the use of isotopes, attest to growth along a broad front.

OLD (1911) AGRICULTURE, A&M

MEDICAL COLLEGE AND HOSPITAL, UF

WING OF NEW LIBRARY, A&M

Main Hall, Agricultural College, 1875

Cyclone

Iowa State University

Iowa's huge digital computer (CYCLONE) serves researchers in science and education, shares "libraries" with Michigan State (MISTIC), Illinois State (ILLIAC), and the University of Australia (SILLIAC). At the Atomic Research Center special equipment and Federal funds make possible the studies with radioactive materials.

Handling radioactive materials

Campus

Volume 43, Number 2

CAMPUS

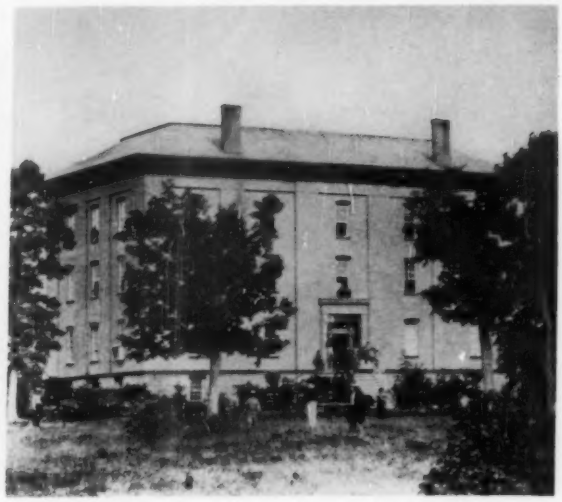
UNIVERSITY OF MARYLAND

MARYLAND's interest in sharing knowledge with other countries is typical of the LG institution. In the 1950's it took on responsibility for the technical assistance program in British Guiana. Nearly all persons going into such programs in agriculture and home economics have been trained in or recruited from LG institutions.

AGRICULTURAL COLLEGE IN THE 1880's

GRADUATION DAY 1959

BEAUMONT CARILLON TOWER



OLD COLLEGE HALL

MICHIGAN STATE UNIVERSITY

BEAUMONT TOWER, center of the main campus, marks the site of Old College Hall, built in mid-1800's for teaching agriculture. MSU is cosmopolitan: it fosters international exchange of students, holds a summer institute on Asia, and has assistance programs in 8 countries. Kellogg Center is the country's largest laboratory for students of hotel and institutional management: as headquarters for the Continuing Education Service it provides 200,000 guests a year with rooms, meals, and conference facilities.

JAPANESE ART AND THE ARTIST

KELLOGG CENTER

St. Paul Campus

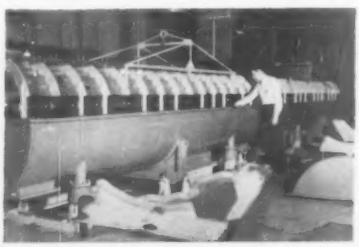
Old Main

Mayo Memorial

University of Minnesota

What began with Old Main in 1867 is now 2 campuses: St. Paul has agriculture, forestry, home economics, veterinary medicine; Minneapolis has the rest but soon will see, across the river, new West Campus. Special facilities—such as Mayo Memorial, nucleus of the medical center; LINAC, which "knocks the chips out of the atom"; and a UNIVAC 1103 computer—favor research in many fields.

Minneapolis Campus



LINAC

UNIVAC

First Experiment Station

New Agricultural Science Building

University of Missouri

Between the beginning of its experiment station and the completion, this year, of its agricultural sciences building, Missouri has known almost a century of illustrious accomplishments. Aureomycin is among them: it was isolated in Sanborn Field, one of the three oldest experimental fields in the world. Today's students are uncovering more secrets of the soil with such aids as electronic devices for measuring the water under a field.

Electronics in the Field

Domestic Science, 1908

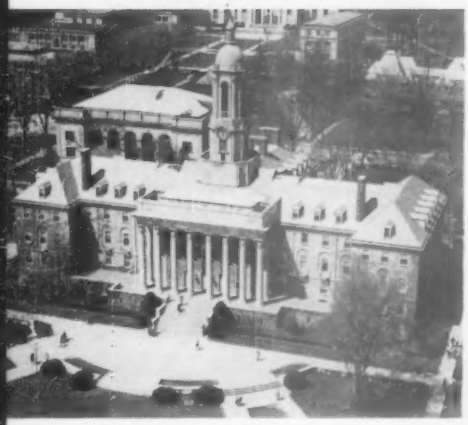
Summer Class in Agriculture, 1900

Volume 43, Number 2

HETZEL UNION BUILDING

THE PENNSYLVANIA STATE UNIVERSITY

A CENTURY ago Old Main looked down on students working in the fields; now, surrounded by the Library, by Education, Liberal Arts, and other colleges, it is at the core of a true university. Research in engineering, long fostered by LG institutions, thrives here, speeded by such equipment as a network calculator; a calorimeter aids research in human nutrition. Scientific agriculture began early here: first degrees in the U.S. went to the class of 1861.

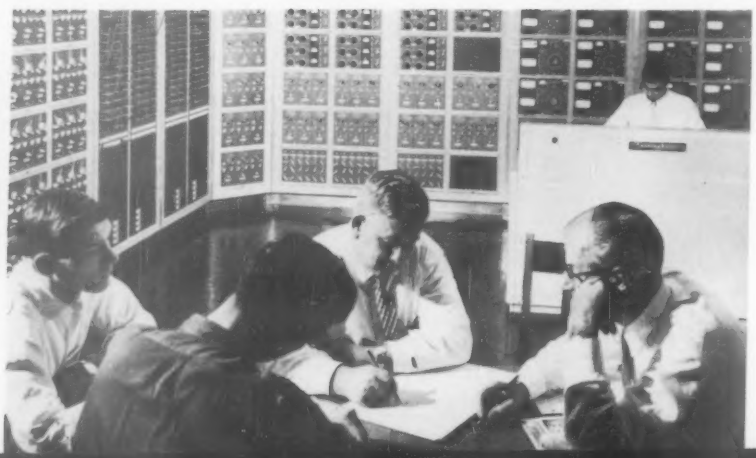


OLD MAIN TODAY

OLD MAIN 1859

CLASS OF 1861

CALORIMETER



NETWORK CALCULATOR

HERRICK RESEARCH CENTER

PURDUE UNIVERSITY

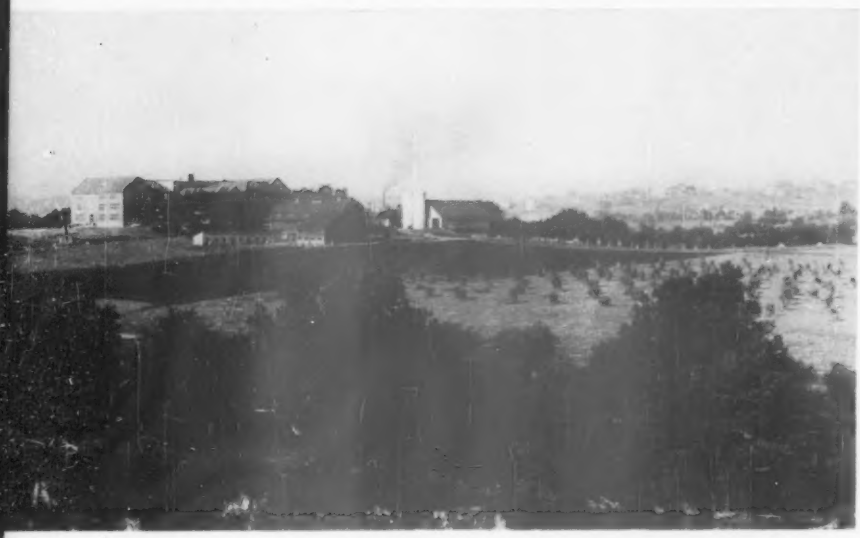
PURDUE has come far since Old Agriculture first served Indiana. Today, with 15,763 students in agriculture, engineering, industrial management, pharmacy, veterinary medicine, home economics, science, education, and the humanities, it serves the region; its research serves the Nation. At Purdue, as at other LG institutions, research is supported by government, industry, and the public, all secure in the knowledge that they are giving power to men who will use it wisely.

OLD AGRICULTURE

LIFE SCIENCE BUILDING

TEMPLE HALL (LEFT) AND FARMERS' CONVENTION MEETING, 1916

OLD COLLEGE OFFICE BUILDING



COLLEGE OF AGRICULTURE, 1921 (ABOVE) AND TODAY

UNIVERSITY OF TENNESSEE

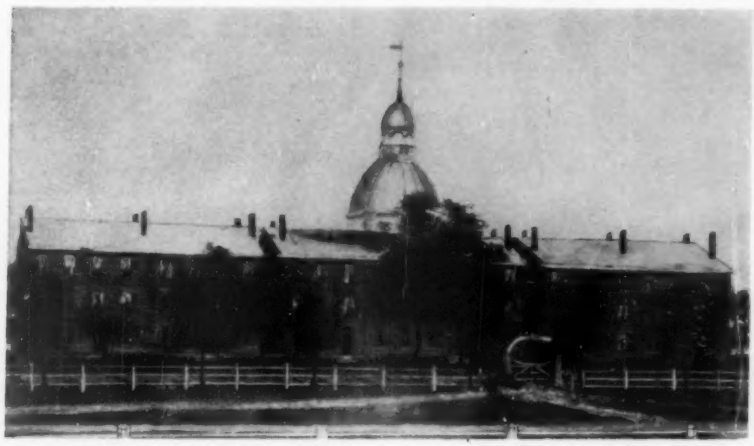
THE University of Tennessee, begun as Blount College in 1794, was one of the first U.S. institutions to become coeducational. Its experiment station, one of the first, was built on a foundation of support from the East Tennessee Farmer's Convention, which in 1912 built Temple Hall as a gift. Always close to the people, the University knows their needs and uses its resources to improve their lives. Artists, doctors, lawyers, scientists, teachers, rural leaders, and other professional men and women in all walks of life look to it as their alma mater.

GYMNASIUM, ARCHITECT'S DRAWING

UNIVERSITY OF VERMONT

HISTORY of the LG college is inextricably bound with the history of the Nation. Lafayette laid the cornerstone of Vermont's original Old Mill Building, a fact which reminds us of the past as effectively as the image of the new gymnasium tells of the future.

HISTORICAL NOTES



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Area Vocational Education Program Series No. 1, 1960, 118 pp., 75 cents (OE–80006.)

Electronic Technology, A Suggested 2-Year Post High School Curriculum.

Area Vocational Education Program Series No. 2, 1960, 97 pp., 70 cents (OE–80009.)

Motor Characteristics of the Mentally Retarded, Cooperative Research Monograph No. 1.

By Robert J. Francis and G. Lawrence Rarick, 1960, 40 pp., 20 cents (OE–35005.)

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By Leona E. Tyler, 1960, 93 pp., 35 cents (OE–25011.)

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By Winslow R. Hatch, 1960, 13 pp., 15 cents (OE–50010.)

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By Romaine P. Mackie, Lloyd M. Dunn, and Leo F. Cain, 1960, 139 pp., 45 cents (Bulletin 1959, No. 6.)

Research in School and College Personnel Services, Summaries of Unpublished Studies, September 1956–September 1958.

By Paul MacMinn, Carroll H. Miller, and Frank E. Wellman, 1960, 136 pp., 55 cents (OE–25007.)

Special Reports, Clearinghouse of Studies on Higher Education, April 1960.

By I. Owen Foster, Lanora G. Lewis, and Winslow R. Hatch, 1960, 61 pp., 40 cents (OE–50009.)

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By Mary Helen Mahar, 1960, 42 pp., 35 cents (OE–15006).

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By Willis C. Brown, reprint from *School Life*, April 1960, 4 pp. (OE–29015.)

Biennial Survey of Education in the United States, 1954–56.

Index, 1960, 14 pp.

Digest of Annual Reports of State Boards for Vocational Education to the Office of Education, Division of Vocational Education, Fiscal Year ended June 30, 1959.

Summary of statistical and financial information, 1960, 69 pp. (OE–80008.)

The Graduate Fellowship Program for the Preparation of Leadership Personnel in the Education of Mentally Retarded Children.

A leaflet, revised 1960, 6 pp. (OE–35001A.)

Improved Programs in Mathematics Require Inservice Education for Teachers, Information for Administrators.

Report of Conference, 1960, 7 pp. (OE–29016.)

The National Defense Student Loan Program, Basic Facts.

A pamphlet, 1960, 11 pp. (OE–55009.)

Organizational Pattern of the Nation's Public Secondary Schools.

By Edmund A. Ford, reprint from *School Life*, May 1960, 4 pp. (OE–23010.)

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By Kenneth E. Brown, July 1960, 11 pp. (OE–29013.)

Report of Conference on International Exchange of Children's Art.

By Mayo Bryce and Ralph Beelke, 1960, 29 pp. (OE–32004.)

Secondary School Mathematics in Transition.

By Daniel W. Snader, reprint from *School Life*, March, April 1960, 11 pp. (OE–29014.)

Selection and Organization of Library Materials for Modern Language Programs.

By Esther M. Eaton and Mary Helen Mahar, reprint from *School Life*, May 1960, 4 pp. (OE–15019.)

Summary Report on Survey of Students Enrolled for Advanced Degrees: Fall 1959.

Cir. No. 625, June 1960, 4 pp. (OE–54009.)

Teacher Exchange Opportunities under the International Educational Exchange Program, 1961–62.

Summer seminars—teaching for American elementary, secondary, and junior college teachers, 1960, 39 pp. (OE–14047.)

Tentative Language Laboratory Vocabulary in Russian.

By Joseph C. Hutchinson and Anne Putnam, September 1960, 11 pp. (OE–27009.)

Title VII—New Educational Media, News and Report.

Special edition, July 1960, 31 pp.

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